

Applicant: Stoltze et al.
Application Serial No.: 10/020,592
Filing Date: December 12, 2001
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-24 (Cancelled)

25. (Previously presented) A method of manufacture of an endovascular support device comprising:

 providing a balloon catheter having a proximal portion, a distal portion and a balloon on the distal portion;

 mounting at least one stent on said balloon of said balloon catheter;

 placing said distal portion of said balloon catheter including said mounted stent within a holding device to prevent expansion of said mounted stent; and

 heating said distal portion placed in said holding device to cause said balloon to expand around said stent.

26. (Previously presented) A method of claim 25 wherein said heating step softens said balloon and further including the step of allowing said balloon to return to an unsoftened state so as to adhere said balloon to said stent.

27. (Previously presented) A method of claim 26 wherein said allowing step includes cooling said balloon.

28. (Previously presented) A method of claim 26 including the step of removing said holding device after unsoftening.

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29. (Previously presented) A method of claim 25 including the step of pressurizing said balloon catheter during said heating step.

30. (Previously presented) A method of manufacture of stent support assembly comprising:
 providing a balloon catheter having an inflatable balloon;
 mounting at least one stent on said balloon of said balloon catheter;
 placing said inflatable balloon including said stent within a softening device;
 softening said balloon around said stent; and
 unsoftening said balloon so that said balloon adheres to said stent.--

31. (Previously presented) A method of claim 30 including the step of pressurizing said balloon catheter during said heating step.

32. (Previously presented) A method of claim 30 including the step of removing said balloon and said stent from said softening device.

33. (Previously presented) A method of claim 30 wherein said softening device is a heating device.

34. (Previously presented) A method of claim 33 wherein said softening step includes heating said balloon around said stent.

35. (Previously presented) A method of claim 33 wherein said unsoftening step includes cooling said balloon.

36. (Previously presented) A catheter system comprising:

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a catheter having an inflatable portion; and
a stent positioned about said inflatable portion and releasably retained to said inflatable portion in depressions formed therein.

37. (Previously presented) A catheter system of claim 36 wherein said stent is adhered to said inflatable portion in said depressions.

38. (Previously presented) A catheter system of claim 37 further including a device configured to accommodate said inflatable portion and said stent, said device being removably positionable thereover during softening.

39. (Previously presented) A catheter system of claim 38 wherein said device is a heating device.

40. (Previously presented) A catheter system of claim 38 wherein said device is removable from said inflatable portion and said stent to allow unsoftening of said inflatable portion.

41. (Previously presented) A method of forming a stent delivery device comprising the steps of:
providing a catheter having an inflatable portion;
placing a stent on the inflatable portion; and
releasably retaining said stent to said inflatable portion in depressions formed therein.--

42. (Previously presented) A method of claim 41 wherein said releasably retaining step includes:
placing said inflatable portion and said stent in a softening device.

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43. (Previously presented) A method of claim 42 wherein said softening device is a heating device.

44. (Previously presented) A method of claim 42 further including the step of heating said inflatable portion and said stent in said heating device to adhere said stent in said depression.

45. (New) A method of mounting a stent onto a delivery system balloon, the method comprising:

- (a) crimping the stent down to a desired size;
- (b) loading the stent onto the delivery system balloon;
- (c) positioning the stent and delivery system balloon in a first section of a mould and closing a second section of the mould so that it is closed onto the first section;
- (d) applying pressure to the delivery system balloon and heat to the mould; and
- (e) discontinuing the pressure and heat.

46. (New) A method of claim 1 and further including cooling the mould.